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Parametric Studies of Aft-Body Drag

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15. Abstract

Aft-body drag of upswept fuselage is of great concern since it affects the cruise efficiency of Transport - both commercial and Military aircraft. A systematic parametric study of this has been carried out on a typical Military transport aircraft model in the Low Speed Facility of LIRI. The aft-body drag was measured using a floor mounted external balance and also by carrying out detailed wake survey. Excellent agreement was found between the drag obtained by the two Techniques. Effects of aft-body parameters like section shape, slenderness ratio, closure angle and upsweep have been discussed in detail. A brief survey of other estimation methods is also included.